

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 34. (Cancelled)

35. (Currently Amended) A method of ~~enriching for~~ obtaining a population of liver cell clusters ~~liver stem cells~~ comprising, isolating a liver cell cluster from liver tissue to yield a population of clusters, wherein said cluster consists essentially of a total of 2 to 5 cells at least one of which is a stem cell associated with a hepatocyte and wherein said stem cell ~~comprising~~ comprises an OV6 antigen and ~~lacking~~ lacks an OC2 antigen, ~~and wherein said population of clusters is enriched for liver stem cells compared to said liver tissue.~~

36. (Currently Amended) The method of claim 35, further comprising ~~the step of~~ enriching said liver tissue for periportal hepatocytes associated with the biliary tree, wherein said ~~step of~~ enriching occurs prior to said isolating said liver cell cluster from liver tissue.

37. (Original) The method of claim 35, wherein said liver cell cluster is a cell doublet.

38. (Currently Amended) The method of claim 35, further comprising enriching said population of liver cell clusters for liver cell clusters ~~said liver cell cluster is derived~~ from the canal of Hering of an adult liver, said enriching comprising identifying and isolating liver cell clusters expressing a bile duct cell marker.

39. (Previously Presented) The method of claim 35, further comprising selecting for expression of desmoplakin, wherein said selecting for expression of desmoplakin occurs after said isolating said liver cell cluster from liver tissue.

40. (Previously Presented) The method of claim 35, further comprising selecting for expression of OV6, wherein said selecting for expression of OV6 occurs after said isolating said liver cell cluster from liver tissue.

41. (Currently Amended) The method of claim 35, further comprising selecting for a cell which expresses an antigen selected from the group consisting of laminin, desmoplakin I, CCAM, CEA, dipeptidyl peptidase-4, ~~gamma-GT~~ γGT, VLA-2, VLA-3, VLA-5, and VLA-6.

42. – 49. (Cancelled)

50. (Previously Presented) The method of claim 35, wherein said liver tissue is fetal liver tissue.

51. (Previously Presented) The method of claim 35, wherein said liver tissue is pediatric liver tissue.

52. (Previously Presented) The method of claim 35, wherein said liver tissue is adult liver tissue.

53. (Previously Presented) The method of claim 35, wherein said liver tissue is obtained from a mouse, rat, dog, baboon, or pig.

54. (Previously Presented) The method of claim 35, wherein said liver tissue is obtained from a human.

55. (Previously Presented) The method of claim 35, wherein said liver tissue is obtained from a living or deceased donor.

56. (Previously Presented) The method of claim 35, wherein said liver tissue is normal liver tissue.

57. (Previously Presented) The method of claim 35, wherein said cluster is isolated from said liver tissue prior to a mechanical injury or exposure to a carcinogen.

58. (Previously Presented) The method of claim 35, wherein said population of clusters comprises at least 60% doublets.

59. (Previously Presented) The method of claim 35, wherein said population of clusters comprises at least 90% doublets.

60. (Previously Presented) The method of claim 35, wherein said population of clusters comprises at least 99% doublets.

61. (Previously Presented) The method of claim 35, further comprising dissociating said stem cell from said hepatocyte and removing said hepatocyte to yield a sample of substantially pure liver stem cells.

62. – 64. (Cancelled)

65. (Currently Amended) The method of claim 35, wherein said isolating a liver cell cluster from liver tissue comprises identifying said stem cell is joined to said hepatocyte by a desmosomal junction between said stem cell and said hepatocyte.

66. (Previously Presented) The method of claim 35, wherein said cluster consists essentially of a total of 3 to 5 cells at least two of which are stem cells associated with a hepatocyte.

67. (Currently Amended) The method of claim 66, wherein said isolating a liver cell cluster from liver tissue comprises identifying a desmosomal junction between at least one of said stems cells and is joined to said hepatocyte by a desmosomal junction.

68. (New) The method of claim 35, wherein said liver cell cluster is a cell triplet.

69. (New) The method of claim 38, wherein said bile duct cell marker is cytokeratin 19 (CK19).